

**It's ALL About Language Skills:
Preparing Preschoolers for Academic Success by
Fostering Academic Talk**

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Quote from Review Article:

“The differences among children in language skills they possess at school entry reflect the cumulative effect of differences in experiences from infancy.”

Hoff, 2013, p. 11

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Research Article Title:

“Kindergarten oral language skill:
A key variable in the intergenerational transmission of
socioeconomic status”

Durham et al., 2007

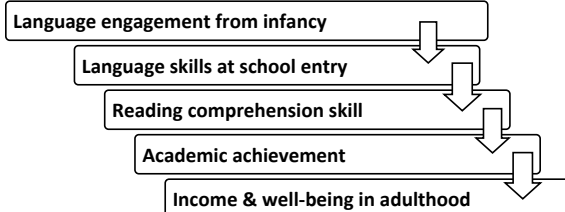
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Current ideas
regarding
both early
language
exposure &
its impact on
language
development



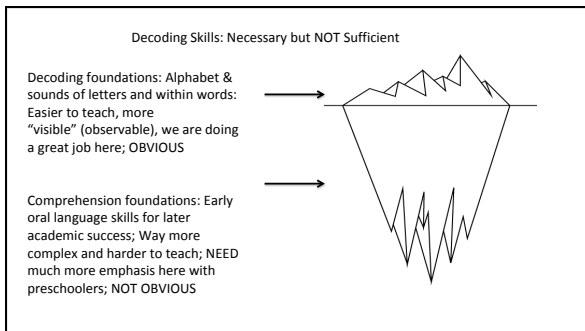
... are
headed in
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direction but
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The Pathway



Two Skills Critical to Reading Comprehension

- Decoding print (sounding out words) is necessary to later reading comprehension
 - We are already doing a great job teaching this, BUT it is only the tip of the iceberg
- Need to supplement decoding skills by fostering the set of oral language skills ESSENTIAL to support later reading comprehension & academic success



“More children fail in school, in the long run, because they cannot cope with “academic language” than because they cannot decode print.”

Gee, 2005, p. 20

Quote from research article:

“Children who start school behind in these areas [language & literacy] are likely to stay behind” Whitehurst & Lonigan, 2001, p. 21

. . . and they are likely to fall even further behind as they advance through the grades.

- Over 33% of the children in the U.S.
 - Enter school unprepared to learn overwhelmingly due to their weak language skills (Whitehurst & Lonigan, 2001)
- Only a little over 7% of children
 - Will be diagnosed as having language impairments by kindergarten or school entry (Tomblin et al., 1997)

U.S. Data From “The Nation’s Report Card” 2016

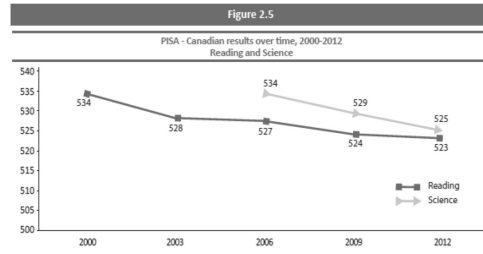
- **54%** of all 4th graders below proficient in reading comprehension (56% of 8th graders)
- Incidence in culturally & linguistically diverse groups
 - Hispanic **79%** below at 4th grade (same at 8th)
 - Black **82%** below at 4th grade (84% at 8th)

How do Canadian children compare to those in the U.S. on reading ability?

- U.S. data are based on U.S. national exams called the NAEP
- To compare our countries, there are data from the Program for International Student Assessment (PISA) of the Organization for Economic Co-operation and Development (OECD).
- These data are from 65 countries in 2012

READING
Score
Data
from
2012 PISA
of OCED

Ranking out of 65		Print Reading Scores	Difference in Score Points Between 10 th and 90 th Percentiles
6 th	British Columbia	535	227
7 th	Ontario	528	235
8 th	Alberta	525	235
12 th	CANADA	523	235
13 th	Quebec	520	238
23 rd	Nova Scotia	508	227
27 th	Saskatchewan	505	226
29 th	Newfoundland & Labrador	503	245
31 st	UNITED STATES	498	235
32 nd	New Brunswick	497	234
34 th	Manitoba	495	235
38 th	Prince Edward Island	490	239
	OCED	496	241



Reading Achievement Concerns on a Different Scale
in U.S. & Canada

- In U.S., a national crisis
- In Canada, a concern about how to more fully develop human capital to benefit individuals and society
- But, for children at academic risk in both countries, their core preschool language weaknesses ARE THE SAME

Canadians are Interested in

- "... the potential reduction of social inequality" (p. 10)
- "Who are the students at the lowest levels [in reading]?" p. 10
- I WILL MORE DIRECTLY REFRAME THESE CONCERNS AS, "What SPECIFIC critical foundational language skills are PRESCHOOL children at risk for later poor reading skills lacking that prevent them from being successful in school and in life . . . AND what can we do about it?"

Quotes from Research Article
Durham et al., 2007

- "The mother's educational attainment has a powerful direct effect on the children's kindergarten language skill" (p. 300).
- "The typically more positive school performance by children from higher-SES families is largely determined by **differential** oral language skills that are provided to their children by more highly educated parents" (p. 301).

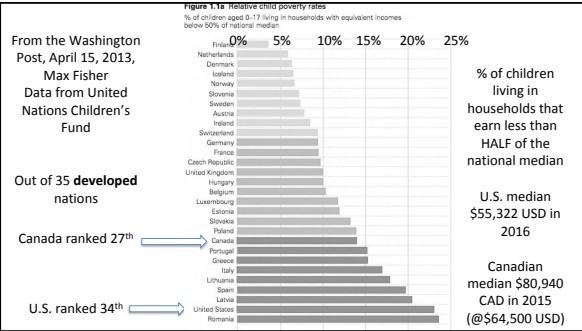
Strong Relationship Between
Education Level & Poverty

Pretty SIMILAR
Educational Attainment Canada and U.S.

Country	Some Post High School	Bachelor's Degree or Higher
Canada	64% (2011)	26% (2011)
United States	59% (2015)	33% (2015)

Canada has Significantly Lower Child Poverty Rates than the U.S.

. . . But Child Poverty is Still High in Both Countries



VERY DIFFERENT
Preschool Attendance Rates

- U.S. (2015 data)
 - 38% of 3-year-olds, 67% of 4-year-olds (36 % publicly funded), and 87 percent of 5-year-olds were enrolled in preprimary preschool programs
- Canada
 - No public preschool
 - In 2012, enough center-based program spaces for 24.1% of 0 - 5 year olds

Hart & Riley, 2003

Research Article Title:
"The Early Catastrophe:
The 30 Million **Word Gap** by Age 3"

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Research Article Title:
"SES differences in language processing skill and vocabulary are evident at 18 months"

Fernald et al., 2013

General (although inaccurate) Conclusion
in Research:

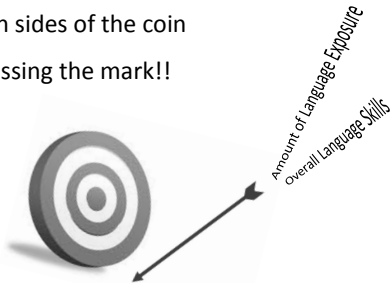
Children Reared in Poverty Have
Overall Weak Oral Language Skills

An Example Quote from Research
Piasta et al., 2012, p. 387

“Children from economically-disadvantaged backgrounds are especially likely to show lags in language and communication skills, including vocabulary, morphology/syntax, and discourse (e.g., Bowey, 1995; Dickinson & Snow, 1987; Hoff-Ginsberg, 1998; Justice & Ezell, 2001)” . . .

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Both sides of the coin
missing the mark!!



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- It **isn't** about adults providing just more language input, but more **academic language** input

AND

- It **isn't** that preschoolers reared in poverty have weak overall language skills, but that they have weak **academic language** skills

van Kleeck,
2014, 2015, 2016

ACADEMIC Language Exposure &
Development in the Preschool Years:
The **ESSENTIAL** Key to Academic
Success

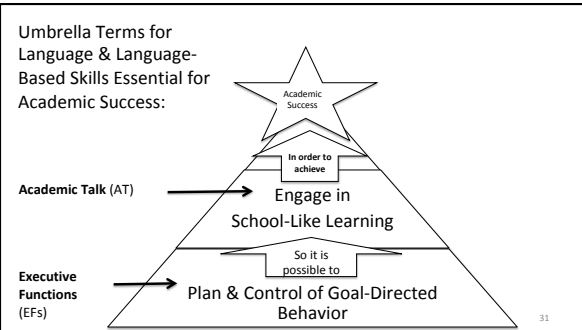
van Kleeck,
2014, 2015, 2016



- **HOW** we interact with preschoolers has far more impact than **HOW MUCH**
- **HOW** we talk is shaped by **WHY** – so we need to hone in on the functions of language that support academic success

van Kleeck,
2014, 2015, 2016

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Executive Functions (EFs)

- **Definition:** “Refers to a set of higher order, core processes that facilitate planning, problem solving, and the initiation and maintenance of goal-directed behavior” (Kieffer et al., 2013)
- **Function:** Allows children to control goal-directed behavior
- **Alternate terminology:** Also referred to as cognitive and or emotional regulation, self-regulation, or (simply) control
- **Language-based:** Titles of empirical studies and reviews highlight the role of language in the development of EF skills

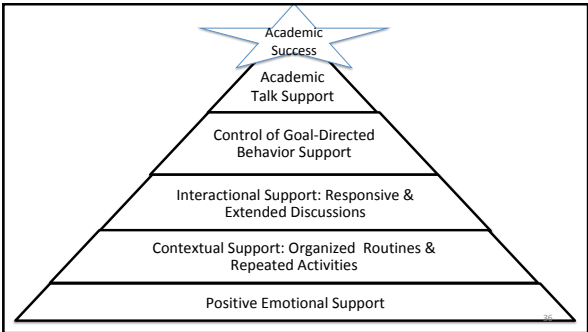
- ### Different Bodies of Empirical Support for Relationship Between EFs and Reading Comprehension
- Uniquely contribute to reading comprehension in typically developing school-age children (13 studies)
 - Related to specific reading comprehension difficulties in school-age children (12); meta-analyses (2)
 - Interventions improve reading comprehension for typical readers (1) and poor comprehenders (4)

EF Skills in Pre-Readers: Empirical Support

- Develop considerably during the preschool years and kindergarten, continue to develop across the life span, and are related to later academic achievement/reading comprehension (12 studies)
- EF interventions in preschool and kindergarten are effective (6 studies, 1 review)

General Functions of Academic Talk

- To foster critical thinking & reasoning
- To gain general knowledge about the world (scientific, socio-cultural, and historical)



Specific Executive Functions Involve Children:

1. Learning to **control their emotions** & express them in a constructive ways
2. Learning about their **own thoughts & feelings**, and that others' thoughts & feelings can be different from theirs
3. Being able to **shift focus** from one task to another
4. Being able to **control impulses** & stop activities at appropriate time
5. Being increasingly ability to **hold information in mind** to support completing tasks

1. Control Emotions (Emotional Self-Regulation)

- **Define**
 - Preschoolers can control emotions during during emotionally charged situations in order to meet **RATHER** than
 - overreact to small problems;
 - have explosive, angry outbursts for little reason;
 - become upset too easily

1. Control Emotions (Emotional Self-Regulation)

- **Teach:** Help children identify, understand, and respond to emotions in themselves and others in a healthy manner
 - Teach emotion vocabulary with pictures and role playing
 - Label children's emotions and discuss possible responses to them
 - Talk about emotions of characters during book sharing
 - Play games, sing songs, and read stories with new feeling words
 - Adult models by labeling his or her own emotions and response to them

2. Learn About Thoughts & Feelings (Theory of Mind)

- **Define:**
 - Consider one's own and others' mental states, including such things as feelings and beliefs
 - Understand that others may have different emotions and motivations from one's own
 - Realize that these inner states influence what people do

2. Learn About Thoughts & Feelings: Theory of Mind (ToM)

- **Teach (Elicit and model):**
 - Ask what child thinks a character in a story is feeling or what another child is thinking or feeling
 - Scaffold responses and ultimately provide a "think aloud" for the child if no response is given
 - Model empathic behavior by talking about how someone must feel

3. Be Able to Shift Focus

- **Define:**
 - Preschooler can keep in mind more than one idea or piece of information and switch back and forth between them (e.g., focus on the meaning of a word, then the sounds in the word)?
 - Preschooler can smoothly transition from one task/activity to the next
- **Teach:**
 - Physical games like "Simon Says" or "Red Light, Green Light" in which the child has to be able to switch gears quickly

4. Control Impulses (Inhibition)

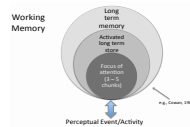
- **Define:**
 - Preschooler can restrain his or her normal or habitual responses and resist impulses (e.g., not grab a desired toy from a playmate)?
 - Preschooler can stop behavior at the appropriate time

4. Control Impulses (Inhibition)

- **Teach:** Adult verbalizes/scaffolds/reinforces inhibition
 - "You can have a turn when Deidra is finished."
 - "Did you see how Joey waited for his turn with the magic wand even though he was so excited and wanted to go first? Waiting is hard work sometimes!"

5. Hold more and more information in mind (Working Memory)

- **Define:** The ability to hold information in mind to support completion of current tasks (a subset from long-term memory); limited capacity (3–5 chunks)
- **Teach:**
 - Use visual prompts to help children remember information (e.g., retelling stories using the pictures in the book)
 - Have children retell events they have participated in
 - Have children go and retrieve a number of non-present items



- **Teach (continued):**
 - Give instructions with an increasing number of steps
 - Develop "ever-increasing" lists (I went to the market and I bought a ...)
 - Teach the alphabet
 - Teach memory strategies (visual imagery, grouping items, rehearsal, creating stories)

Idea of Academic Talk Requires Distinguishing Two Different Language Registers

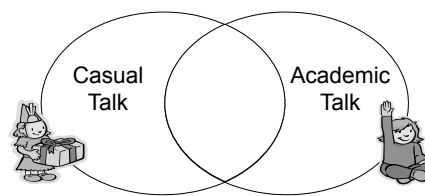
- Language used for everyday living – **casual talk**
- Language used to engage in school-like learning – **academic talk**

Academic Talk (AT)

- **Definition:** A register or set of co-occurring features of language used for the purpose of teaching and learning in Western culture
- **Function:** Allows children to engage in school learning – transmit, display, and build scientific and socio-historical knowledge and understanding of the world
- **Importance:** Critical to later reading comprehension and academic success (directly addressed in CCSS)
- **When to focus on:** Can and should begin to foster in preschoolers (van Kleeck, 2014a, 2015)



An example of two language registers: "baby talk" vs. "adult talk"

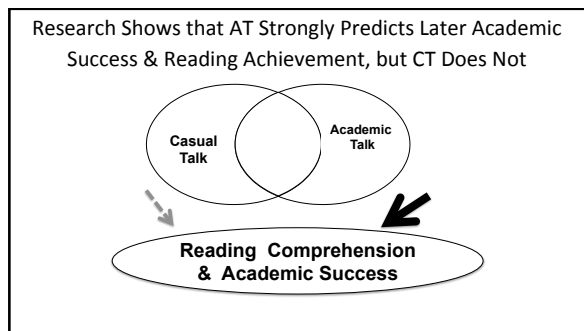


Registers are Different Patterns of Language Used for Different Purposes

Functions of Preschool Oral Language Registers

<h4>Casual Talk (CT)</h4> <p>Language for Daily Living: Get things done & have relationships</p>	<h4>Academic Talk (AT)</h4> <p>Language for Teaching & Learning: Transmit, display, and build knowledge and understanding</p>
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- ### Background Influence on Preschoolers' CT & AT Skills
- Parents higher education levels: Almost all strong CT and strong AT; interwoven from birth
 - Parents lower education levels: Almost all strong CT; many weak AT
 - Different language than school: Often learning new register AT and new language (French or English) at school

- ### Why this difference in exposure to AT in the homes of different children?
- The more time Mom spent in school, the better she got at AT herself.
 - The better she is, the more she uses AT just naturally with her own children at home.
 - The more she uses AT, the more her child learns to understand and use AT, too.
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- ### Some Characteristics of Academic Talk Include Helping Children: (van Kleeck, 2014)
1. Move from talking about specific things to **general info about categories of things** (e.g., bird in book says he has to fly south to birds fly south in the winter)
 2. Use increasingly specific & **precise concepts/vocabulary** (e.g., fly south to *migrate*)
 3. Produce **logical, sequenced narratives** (more than one sentence produced on same topic)

4. Answer **higher-level "thinking/inferencing" questions** (e.g., predict, speculate, summarize, explain, define, compare/contrast, give examples, evaluate); and **use talk about thinking** (words like *think, wonder, guess, know*)
 5. Become **consciously aware of language & thinking** (e.g., the sounds in spoken words that connect to letters of the alphabet; talking about how to remember things)
 6. **Express degree of certainty** (e.g., *maybe, probably, usually*) about ideas
 7. Increase amount of **talk about things not physically present**
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1. Information About Categories of Things

- **Define:** General information about categories of things (e.g., how members of category function/ behave; what their properties and features are) **OR** about specific things (as in history lessons) part of general cultural knowledge (e.g., who Justin Trudeau is)
- **Teach:** Move discussion about something specific (a bear that is a character in a book) to something more general (Lots of bears sleep all winter); Adult models/ engages child in use of category words and discusses features of categories (e.g., Bears like honey; Bears are mammals);

2. Precise Concepts & Vocabulary

- **Define:** The concepts discussed in school become increasingly precise, requiring precise scientific vocabulary
- **Teach:** When the word “flock” comes up in a book the adult is reading to the child regarding a flock of birds, stop and discuss what it means. Talk about when the word flock (lots of birds or sheep) and when it isn’t (lots of horses or dogs); Explain what the word “hibernation” means when a story talks about the main character, a bear, falling asleep for a long time

Precise Concepts & Vocabulary

- Preschoolers can learn much higher level words than you think
- Examples from an preschool language and literacy program I have created and am using in preschool classrooms
 - *Dedication and character* (in a book), *illustrator*, *drift*, *hollow*, *clumsy*, *mumble*, *gaze*, *hibernation*, *withered*

3. Logical & Sequenced Narratives

- **Define:** Talk in school requires reasoning that is analytic, reflective, logical, linear or step-wise, and requires considering alternative perspectives; requires use of topic-centered, sequentially organized narratives and discussions
- **Teach:**
 - After a story book has been shared a few times, the adult might ask the child to retell the story and scaffold his or her attempt to do so
 - Take pictures as an activity unfolds and put them into a picture book child can use to retell someone who wasn’t there the steps in the activity (e.g., planting a seed)

4. Engage in Higher-Level Reasoning/ Inferencing

- **Define:** Use of inferential reasoning in order to explain, problem solve, categorize, talk about cause and effect, predict, summarize, compare, contrast, describe, define, justify, give examples, etc.

4. Engage in Higher-Level Reasoning/ Inferencing

- **Teach:**
 - Ask challenging questions; e.g., “*This book is called Mooncake. What do you think Mooncake might be?*”
 - Provide “think alouds” when children are not able to respond to show them how to think through a likely answer (see van Kleeck, 2014a, 2014b; van Kleeck et al., 2006)
 - Use verbs of cognition: *Think, know, wonder, guess, decide, remember, understand, imagine, predict, etc.*

5. Become Consciously Aware of Language and Thinking

- **Define:** Conscious reflection upon cognitive processes (e.g., memory, comprehension, learning, and thinking) or of language and its various components (e.g., phonology, morphology, and syntax), as well as the subsequent abilities to manipulate those components.
- **Teach:** Focus on print and sounds within words; discuss/model memory strategies

6. Express Degree of Certainty

- **Define:** In academic talk, need to be explicit about the credibility of one's claims (not required in casual talk)
- Categories include talking about:
 - Possibility: *might, seems, presumably*
 - Probability: *likely, definitely, certainly, will, might*
 - Typicality: *always, sometimes, never, frequently, usually*
 - Certainty: *doubt, for sure, guess, obviously, pretty certain, undoubtedly, in fact*
- **Teach:** Model uses of above words

7. Talk About Things Not Physically Present

- **Define:** Talk often removed from shared background knowledge with socially intimate others and from immediate physical context
- **Teach along continuum of support:** Activities that have increasingly less contextual support: Ongoing activity > Past activity > Book sharing > Future activity > Imaginary activity > Independent test taking (in school)

Intervention Integrating EFs and AT During a Book Sharing Interaction (Just One Possible Context)

Executive Functions

1. Control emotions
2. Learn about thoughts & emotions
3. Shift focus
4. Control impulses
5. Hold information in mind

Academic Talk

1. Information about categories of things
2. Precise concepts/vocabulary
3. Logical, sequenced narratives
4. Higher-level reasoning/ inferencing
5. Conscious awareness of language and thinking
6. Express degree of certainty
7. Talk about non-present things

EXAMPLE: *Moonbear's Shadow* by Frank Asch

SUMMARY: This is a story of a bear who goes fishing and his shadow scares the fish away. The entire story focuses on the Bear's various attempts to make his shadow go away so he can resume fishing. At first he just tells it to go away, but it doesn't. Then he tries to run away from it, and that doesn't work either. His subsequent failed attempts included hiding behind a tree, climbing high up on a cliff, nailing his shadow to the ground, burying his shadow in a hole, and slamming the door to lock his shadow inside. Finally he makes a deal with his shadow that "if you let me catch a fish, I'll let you catch one." Because the sun is now high in the sky he no longer has a shadow, Bear is able to catch a fish. His shadow catches one, too.

1. **Control emotions:** Adult comments and asks, "It says Bear's shadow scared the fish away. When you get scared, what do you do?"
2. **Learn about thoughts & emotions:** The adult could say, "Bear tried so many different things to make his shadow go away, but his shadow wouldn't go away. How do you think Bear feels after trying all those things?"
3. **Shift focus:** Can be fostered during book sharing by moving from meaning to a focus on print & then going back to a focus on meaning again. As an example here, the adult could turn to the first page of the story, and ask the child, "Where should I start reading?" This causes the child to switch from the meaning of the story to print conventions.

- 4. **Control impulses:** Adult could gently redirect child's attention back to the story if she or he becomes distracted.
- 5. **Holding more and more information in mind:** Once the bear has tried two or three things to get rid of his shadow, the adult could ask the child to recount the different things bear has tried so far to get rid of his shadow.

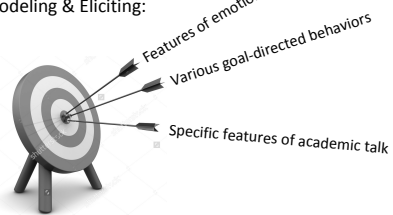
1. General information about categories of things: Adult could relate information about something specific in the book to information about a category. So, the adult could say, *"Fish don't know that shadows aren't real things – they just sense that something is near them – so they swim away so they are safe."*

- 2. **Precise concepts/Vocabulary:** The adult might use an episode in the book where the bear tries to climb a cliff to get rid of his shadow. Here the adult could launch a discussion of how a cliff and hill are the same and different to highlight when the word cliff is used.
- 3. **Logically sequenced reasoning in producing narratives,** the adult could ask the child to retell the story to a stuffed animal that did not hear it because it was asleep.


- 4. **Higher-level thinking/inferencing:** The adult can ask questions such as, *"What do you think this book is going to be about? Why do you think running away didn't help Bear get rid of his shadow?"*
- 5. **Conscious awareness of language & thinking:** The adult might say, *"This book is called Bear Shadow. Do you see a letter like the first letter in Bert's name here?"* OR *"We can look at the pictures to help us remember what happened in the story."*

- 6. **Express degree of certainty:** The adult might model this by saying, *"I think maybe this book is going to be about the bear on the cover and his shadow because the title is called Bear Shadow"*
- 7. **Talking about things not physically present:** The book content is already decontextualized from immediate context, so this is a given during book sharing. It can be made increasingly so by discussing things that happened in the book at some later time.

Hitting the Target in
Early Language
Exposure by
Modeling & Eliciting:



Child Will Subsequently Develop:



- Sense of self as successful, valued & autonomous learner
- Control of her or his own goal-directed behaviors
- Skill using & responding to academic talk to think critically & gain knowledge about the world

The TAB⁴I Program™

- Talking About Books Builds Big Brains Program
- Conducting in about 35 preschool classrooms serving low-income children
- Uses pre-planned and scripted questions & discussions embedded in each of several repeated read alouds of six different published children's stories by Frank Asch

The TAB⁴I Program™ Books by Frank Asch

- *Mooncake*
- *Moonbear's Shadow*
- *Moondance*
- *Moongame*
- *Moonbear's Pet*
- *Moonbear's Bargain*

How the TAB⁴I Project™ Works

Preplanned & embedded throughout books are scripts are designed

- To foster specific features of
 - Goal-directed behavior
 - Academic talk
- To do this via
 - Engaging children in extended discussions
 - Modeling how to think in response to higher-level questions